Power Sector Roundtable 2nd Workshop

U.S. and China Power Sectors Address Climate Change

October 2015

NRDC and WWF jointly held the 2nd workshop of Power Sector Roundtable, "U.S. and China Power Sectors Address Climate Change", on October 16, 2015, with support from Energy Foundation China, Paulson Institute and the Regulatory Assistance Project (RAP). Closely following the 2015 U.S.-China Joint Presidential Statement on Climate Change, the workshop aimed at helping participants better understand and learn from the important measures that China and the U.S. are implementing in the power sector. Domestic experts from the State Grid, China Southern Grid, State Grid Energy Research Institute and NDRC Energy Research Institute, and U.S. experts from NRDC and RAP shared perspectives and insights. Around 70 participants from grid companies, research institutes, NGOs and media attended the workshop and engaged in robust discussion with the experts.

Background

In the U.S.-China Joint Presidential Statement on Climate Change announced on September 26, 2015, President Barack Obama and President Xi Jinping reaffirmed their shared conviction that climate change is one of the greatest threats facing humanity and that their two countries have a critical role to play in addressing it. Both United States and China are committed to achieving their respective post-2020 actions as announced in last November's Joint Announcement and are determined to quickly develop domestic policies to address climate change. In the joint statement announcement, both nations recognized the power sector's important role in these domestic climate change policies. The U.S. "Clean Power Plan" will reduce CO2 emissions from the electricity sector by 32% from 2005 levels by 2030. Meanwhile, through a combination of green power dispatch and the establishment of a national carbon emissions trading scheme, China will work to decrease its CO2 emission intensity by 60-65% from 2005 levels by 2030. Separately, President Xi Jinping spoke at the United Nations General Assembly about the possibility of constructing a global energy internet in order to meet global electricity demand with clean, low-carbon energy. The United States have also implemented various measures across the country to integrate renewable energy.

The purpose of this Roundtable is to help interested parties better understand and learn from the important measures that China and U.S. are implementing in the electricity sector, with a view toward how these measures will enable China's electricity sector to effectively address climate change. The Roundtable presentations focused on green dispatch efforts by China's grid companies, the U.S. Clean Power Plan, carbon trading in the power sector, China's global energy internet vision, and renewable integration in the U.S. Through a combination of presentations and facilitated dialogues, the workshop participants explored the connection between the two nations' power sectors and further opportunities for addressing CO2 emissions.

Takeaways and Outlook

From the perspective of the U.S.-China Joint Presidential Statement, the roundtable focused on the strategies and measures taken by the U.S. and China power sectors in addressing climate change. Both the workshop discussion sessions and following media reports indicated extensive attentions to this issues. Participants held robust discussion around issues regarding U.S. Clean Power Plan, green dispatch in China, energy internet, power grid flexibility and carbon trade market. The following issues have drawn most attentions:

- **The role of power sector in propelling carbon emission peaking.** Undoubtedly, power sector plays a crucial role in addressing climate change and accelerating carbon emission peaking. The development path China's power sector takes to a large extent determines the path of carbon emission reduction.

- **Coal plants phasing out in power sector transition.** Coal plants went through a phasing-down process in most countries' power sector transition. Therefore, both the U.S. Clean Power Plan and China's green dispatch efforts should take this matter into account and design a viable coal plants phasing-out mechanism, in order to keep power sector transition on track.

- **How could China acquire more flexible power resources?** Renewable energy is likely to be scaled up with great efforts in power sector transition. To ensure healthy development of renewable energy, one of the top priories would be reducing wind and solar curtailment. Building flexible power resource and increasing power grid flexibility are key to resolve this issue. More specific measures include developing demand-side resource market, as well as utilizing demand response, electric vehicles and energy storage as flexible resources.

- **China and U.S. experiences and practices in energy internet.** China's advocacy for global energy internet and U.S.'s efforts on increasing power grid flexibility are essentially different interpretations of energy internet. We wish to leverage international lessons learned to enhance the role of China's energy internet in propelling successful power sector transition.

- **Carbon trade mechanism design to engage power sector.** China plans to establish carbon trade market in 2017. Given the critical role of power sector, how to design a carbon trade mechanism that could engage power sector and at the same time help with its transition, is worth further exploring.